

Serial No. 09/715,045  
HP 30004771-1 US  
LHB 1509-134  
Page 2

IN THE CLAIMS:

Please amend claims 14-16, 19, and 20 as follows:

1. (Previously presented) A telecommunication method using a network including at least two network elements; the method comprising the steps of:

broadcasting data over the network by a first network element;

including, within the data broadcast by the least two network elements, the resources of the first network element available for sharing;

requesting the use of at least part of the available resources of the first network element by a second network element;

negotiating a cost for the resources by the first and second network elements;

after the cost has been negotiated, executing a task by co-operation of the first and second network elements by using the requested and negotiated resources of the first network element and resources of the second network element; and

releasing the resources of the first network element by the second network element after completion of the task.

2. (Cancelled)

Serial No. 09/715,045  
HP 30004771-1 US  
LHB 1509-134  
Page 3

3. (Previously presented) A method according to claim 1, wherein the network is in the form of a wide band short range wireless network.

4. (Previously presented) A method according to claim 1, wherein at least one of the network elements in the form of a mobile device.

5. (Previously presented) A method according to claim 1, wherein the network includes geographically distributed wireless base stations.

6. (Previously presented) A method according to claim 1, wherein the network is a piconet.

7. (Previously presented) A method according to claim 1, wherein at least one of the following is the resource to be shared:

memory;

a network connection;

processing power;

power source; or

a cheap connection.

8. (Cancelled)

Serial No. 09/715,045  
HP 30004771-1 US  
LHB 1509-134  
Page 4

9. (Previously presented) A network comprising first and second network elements, the first network element having broadcast means adapted to broadcast data indicative of resources of the first network element available for sharing, the second network element having communication means adapted to request at least some of said available resources, the first and second network elements being adapted to execute a task, co-operatively utilizing said resources, and to complete a task at the first network element by using resources at the second network element.

10. (Original) A network according to claim 9 wherein the network is a wireless network.

11. (Original) A network according to claim 9 wherein the network is a wide bandwidth short range wireless network.

12. (Previously presented) A network according to claim 9 wherein the first and second network elements includes , respectively, any one of:

- a personal digital assistant;
- a pc;
- a laptop computer;
- a mobile telephone;
- a router;
- a server;

Serial No. 09/715,045  
HP 30004771-1 US  
LHB 1509-134  
Page 5

a regenerative repeater;  
a multiplexer; or  
a codec.

13. (Original) A network according to claim 9 wherein the resource for sharing is any one of:

memory;  
storage capacity;  
network connections; or  
a connection to a public land mobile network.

14. (Currently amended) A method of sharing network resource  
~~sharing protocol~~ resources between first and second elements of a  
network, the ~~protocol~~ method including:

performing a discovery phase;  
performing a negotiation phase; and  
performing a fulfillment phase[[:]],

the negotiation phase including an agreement of a cost for the  
use of sharable resources of the first network element by [[a]] the  
second network element during the fulfillment phase[[:]], and

the fulfillment phase including co-operation between the first  
and second network elements of the sharable resources of the first  
element in accordance with the agreement made during the negotiation  
phase.

Serial No. 09/715,045

HP 30004771-1 US

LHB 1509-134

Page 6

15. (Currently amended) A ~~preteel~~ method according to claim 14, wherein the discovery phase includes a first network element broadcasting a notification of its sharable resources over the network.

16. (Currently amended) A ~~preteel~~ method according to claim 14, wherein the negotiation phase includes the second network element requesting at least some sharable resources of the first network element.

17. (Cancelled)

18. (Cancelled)

19. (Currently amended) A ~~preteel~~ method according to claim 14 wherein the fulfillment phase includes execution of a task by the first network element and passing of a result of the task to the second network element.

20. (Currently amended) A ~~preteel~~ method according to claim 14 wherein the fulfillment phase includes termination of communication between the first and second network elements.

21. (Previously presented) A first network element for use in a telecommunication network including the first network element and a second network element arranged for (a) issuing requests to the

Serial No. 09/715,045  
HP 30004771-1 US  
LHB 1509-134  
Page 7

first network element and (b) sending the requests to the first network element via the telecommunication network, the first network element comprising:

a transmitter/receiver for broadcasting and receiving data over the network; and

a processor arrangement connected to interact with the transmitter/receiver for (a) indicating, within the data, resources of the first network element available for sharing, (b) receiving a request by the second network element for use of at least part of the available resources of the first network element by the second network element, the use being to assist in performing a task of the second network element, (c) enabling the first network element to cooperate with the second network element to negotiate a cost for the resources, (d) using the resources in cooperation with resources of the second network element to assist in performing the task, the processor being arranged to use the resources after completion of the negotiation, and (e) releasing the resources of the first network element after completion of the task in response to a request by the second network element.

**22.** (Previously presented) A method of operating a first network element of a telecommunication network including the first network element and a second network element arranged for (a) issuing requests to the first network element and (b) sending the

Serial No. 09/715,045  
HP 30004771-1 US  
LHB 1509-134  
Page 8

requests to the first network element via the telecommunication network, the operating method of the first network element comprising:

broadcasting data over the network;

including, within the data broadcast by the first network element, the resources of the first network element available for sharing;

receiving a request, via the network, by the second network element, the use being to assist in performing a task of the second network element, for use of at least part of the available resources of the first network element by the second network element;

negotiating a cost for the resources by cooperating with the second network element;

using the resources in cooperation with resources of the second network element to assist in performing the task, the processor being arranged to use the resources after completion of the negotiation, and

releasing the resources of the first network element after completion of the task in response to a request received by the first network element, via the network, as transmitted by the second network element.

23. (Previously presented) A second network element for use in a telecommunication network including a first network element and

Serial No. 09/715,045  
HP 30004771-1 US  
LHB 1509-134  
Page 9

the second network element, the first network element being arranged for (a) broadcasting data over the network, (b) indicating, within the data, resources of the first network element available for sharing, (c) releasing the resources of the first network element upon completion of the task in response to a request by the second network element, the second network element comprising:

a transmitter/receiver for broadcasting and receiving data over the network; and

a processor arrangement connected to interact with the transmitter/receiver for (a) causing transmission via the network to the first network element of a request for the use of at least part of the available resources of the first network element, (b) causing the second network element to cooperate with the first network element to negotiate a cost for the available resources, (c) causing co-operation of a resource of the second network element with the available resources of the first network element, the co-operation causing the performance of a task of the second network element, the co-operation occurring after the completion of the negotiation, and (d) causing transmission via the network to the first network element for release of the available resources of the first network element after completion of the task.

24. (Previously presented) A method of operating a second network element of a telecommunication network including a first



Serial No. 09/715,045  
HP 30004771-1 US  
LHB 1509-134  
Page 10

network element and the second network element, the first network element being arranged for (a) broadcasting data over the network, (b) indicating, within the data, resources of the first network element available for sharing, and (c) releasing the resources of the first network element upon completion of the task in response to a request by the second network element, the method of operating the second network element comprising:

sending, via the network, to the first network element a request for use of at least part of the available resources of the first network element;

negotiating a cost for the resources by cooperating with the first network element;

causing co-operation of a resource of the second network element with the available resources of the first network element, the co-operation causing the performance of a task of the second network element, the co-operation occurring after the completion of the negotiation; and

sending, via the network, to the first network element a release of the resources of the first network element after completion of the task.

25. (Previously presented) A telecommunication method using a network including at least two network elements; the method comprising the steps of:

Serial No. 09/715,045

HP 30004771-1 US

LHB 1509-134

Page 11

broadcasting data over the network by a first network element;  
including, within the data broadcast by the first network element, the resources of the first network element available for sharing;  
requesting the use of at least part of the available resources of the first network element by a second network element;  
executing a task by co-operation of the first and second network elements;  
releasing the resources of the first network element by the second network element upon completion of the task; and  
completing the task at the first network element by using resources at the second network element.

26. (*Previously presented*) A method according to claim 25, wherein the network is a wide band short range wireless network.

27. (*Previously presented*) A method according to claim 25, wherein at least one of the network elements is a mobile device.

28. (*Previously presented*) A method according to claim 25, wherein the network includes geographically distributed wireless base stations.

29. (*Cancelled*)

Serial No. 09/715,045

HP 30004771-1 US

LHB 1509-134

Page 12

30. (Previously presented) A method according to claim 25, wherein at least one of the following is the resource to be shared:

memory;

a network connection;

processing power;

power source; or

a cheap connection.

31. (Previously presented) A first network element for use in a telecommunication network including the first network element and a second network element arranged for (a) issuing requests to the first network element and (b) sending the requests to the first network element via the telecommunication network, the first network element comprising:

a transmitter/receiver for broadcasting and receiving data over the network; and

a processor arrangement connected to interact with the transmitter/receiver for (a) indicating, within the data broadcast by the transmitter/receiver, resources of the first network element available for sharing, (b) receiving a request by the second network element for use of at least part of the available resources of the first network element by the second network element, (c) causing the first network element to cooperate with the second network element to execute a task, (d) releasing the resources of the first network

Serial No. 09/715,045  
HP 30004771-1 US  
LHB 1509-134  
Page 13

element upon completion of the task in response to a request by the second network element, and (e) completing the task at the first network element by using resources at the second network element.

32. (Previously presented) A method of operating a first network element of a telecommunication network including the first network element and a second network element arranged for (a) issuing requests to the first network element and (b) sending the requests to the first network element via the telecommunication network, the operating method of the first network element comprising:

broadcasting data over the network;

including, within the data broadcast by the first network element, the resources of the first network element available for sharing;

receiving a request, via the network, by the second network element for use of at least part of the available resources of the first network element by the second network element;

executing a task by cooperating with the second network element;

releasing the resources of the first network element after completion of the task in response to a request received by the first network element, via the network, as transmitted by the second network element; and

Serial No. 09/715,045  
HP 30004771-1 US  
LHB 1509-134  
Page 14

completing the task at the first network element by using resources at the second network element.

33. (Previously presented) A second network element for use in a telecommunication network including a first network element and the second network element, the first network element being arranged for (a) broadcasting data over the network, (b) indicating, within the data broadcast by the first network element, resources of the first network element available for sharing, (c) releasing the resources of the first network element upon completion of the task in response to a request by the second network element, the second network element comprising:

a transmitter/receiver for broadcasting and receiving data over the network; and

a processor arrangement connected to interact with the transmitter/receiver for (a) causing transmission via the network to the first network element of a request for the use of at least part of the available resources of the first network element, (b) causing the second network element to cooperate with the first network element to execute a task, (c) causing transmission via the network to the first network element for release of the resources of the first network element after completion of the task, and (d) causing resources at the second network element to be used for completing the task at the first network element.

Serial No. 09/715,045  
HP 30004771-1 US  
LHB 1509-134  
Page 15

34. (Previously presented) A method of operating a second network element of a telecommunication network including the first network element and the second network element, the first network element being arranged for (a) broadcasting data over the network, (b) indicating, within the data resources of the first network element available for sharing, (c) co-operating with the second network element to complete a task of the second network element, and (d) releasing the resources of the first network element upon completion of the task in response to a request by the second network element, the method of operating the second network element comprising:

sending, via the network, to the first network element a request for the use of at least part of the available resources of the first network element;

cooperating with the first network element so the task is completed at the first network element by using resources at the second network element; and

sending, via the network, to the first network element a release of the resources of the first network element after completion of the task.

35. (Previously presented) A telecommunication method using a network including at least first, second and third network elements; the method comprising the steps of:

Serial No. 09/715,045  
HP 30004771-1 US  
LHB 1509-134  
Page 16

broadcasting data over the network by the first and second network elements;

including, within the data broadcast by the first and second network elements, the respective resources of the first and second network elements available for sharing by other network elements of the network;

requesting, by the third network element, the use of at least part of the available resources of the first and second network elements;

negotiating a cost for the available resources of the first network element by the first and third network elements;

negotiating a cost for the available resources of the second network elements by the second and third network elements;

after the costs have been negotiated, executing a task by co-operation of the first, second and third network elements by using the requested and negotiated resources of the first and second network elements and resources of the third network element; and

releasing the resources of the first and second network elements by the third network element after completion of the task.

36. (Previously presented) The method of claim 35 wherein the network is a wideband short-range wireless network.

37. (Previously presented) The method of claim 35 wherein the network is a piconet.

Serial No. 09/715,045  
HP 30004771-1 US  
LHB 1509-134  
Page 17

38. (Previously presented) The method of claim 35 wherein the available resources of the first and second network elements include at least one of: memory; a network connection; processing power; power sources; and a cheap connection.

39. (Previously presented) A telecommunication network comprising: at least first, second and third network elements; the first and second network elements being arranged for broadcasting data over the network, the first and second network elements being arranged so the data broadcast thereby includes the respective resources of the first and second network elements available for sharing by other network elements of the network; the third network element being arranged for requesting the use of at least part of the available resources of the first and second network elements; the first and third network elements being arranged for negotiating a cost for the available resources of the first network element for use in conjunction with a task to be performed by the third network element; the second and third network elements being arranged for negotiating a cost for the available resources of the second network element for use in conjunction with the task to be performed by the third network element; the first, second and third network elements being arranged so that after the costs have been negotiated the task to be performed by the third network element is cooperatively performed by using the requested and negotiated resources of the



Serial No. 09/715,045  
HP 30004771-1 US  
LHB 1509-134  
Page 18

first and second elements and resources of the third network element; the first, second and third network elements being arranged so the resources of the first second network elements are released by the third network element after completion of the task.

40. *(Previously presented)* The network of claim 39 wherein the network is a wideband short-range wireless network and each of the first, second and third network elements includes a transmitter/receiver adapted for use with the wideband short-range wireless network.

41. *(Previously presented)* The network of claim 39 wherein the network is a piconet and each of the first, second and third network elements includes a transmitter/receiver adapted for use with the piconet.

42. *(Previously presented)* The network of claim 39 wherein each of the first and second network elements includes, as a resource to be shared at least one of the following: memory; a network connection; processing power; power source; and a cheap connection.

43. *(Previously presented)* A network comprising at least first and second network nodes, the first network node including a first transmitter/receiver arrangement for (a) broadcasting to other network nodes of the network data indicative of resources of the first network node available for sharing to assist in performing

Serial No. 09/715,045  
HP 30004771-1 US  
LHB 1509-134  
Page 19

tasks of the other network nodes, and (b) receiving signals from the other network nodes, the second network node having a second transmitter/receiver arrangement for (a) broadcasting to further network nodes of the network a request for shared resources available from the further network nodes to assist in performing a task of the second network node and (b) receiving from the first network node the broadcast data indicative of the first network node available for sharing, the first and second network nodes being arranged for causing the first and second transmitter/receiver arrangements to exchange signals (a) concerned with negotiating a cost to the second network node of resources of the first network node available for sharing to assist in performing the task of the second network node and (b) for thereafter enabling the resources of the first network node available for sharing to be used cooperatively with resources of the second network node to assist in performing the task of the second network node.

44. (Previously presented) The network of claim 43 wherein the network is a piconet and the first and second transmitter/receiver arrangements are adapted for use with the piconet.

45. (Previously presented) The network element of claim 21 wherein the network is a piconet and the transmitter/receiver is adapted for use with the piconet.

Serial No. 09/715,045

HP 30004771-1 US

LHB 1509-134

Page 20

46. (Previously presented) The method of claim 22 wherein the network is a piconet and the data are transmitted from the first network element and the request is received by the first network element by a transmitter/receiver arrangement adapted for use with the piconet.

47. (Previously presented) The network element of claim 23 wherein the network is a piconet and the data are transmitted from the first network element and received by the first network element by a transmitter/receiver arrangement adapted for use with the piconet.

48. (Previously presented) The method of claim 24 wherein the network is a piconet and the request and release are sent from the second network element by a transmitter/receiver arrangement adapted for use with the piconet and the co-operation by the second network element is achieved by the transmitter/receiver arrangement adapted for use with the piconet.

49. (Previously presented) The method of claim 25 wherein the network is a piconet and the data are transmitted from the first network element by a first transmitter/receiver arrangement of the first network element adapted for use with the piconet, and the request and release are transmitted from the second network element by a second transmitter/receiver arrangement of the second network

Serial No. 09/715,045  
HP 30004771-1 US  
LHB 1509-134  
Page 21

element adapted for use with the piconet, the first and second transmitter/receiver arrangements exchanging signals causing the task to be executed by co-operation of the first and second network elements.

50. (*Previously presented*) The network element of claim 31 wherein the network is a piconet and the transmitter/receiver is adapted for use with the piconet.

51. (*Previously presented*) The method of claim 32 wherein the network is a piconet and the data are transmitted from the first network element and the request is received at the first network element by a transmitter/receiver arrangement adapted for use with the piconet.

52. (*Previously presented*) The network element of claim 33 wherein the network is a piconet and the transmitter/receiver is adapted for use with the piconet.

53. (*Previously presented*) The method of claim 34 wherein the network is a piconet and the request and release are sent from the second network element by a transmitter/receiver arrangement adapted for use with the piconet and the task is completed at the first network element as a result of cooperation between the first and second network elements via signals coupled through the transmitter/receiver arrangement adapted for use with the piconet.

Serial No. 09/715,045  
HP 30004771-1 US  
LHB 1509-134  
Page 22

54. (*Previously presented*) A network comprising at least first and second network nodes, the first network node including a first transmitter/receiver arrangement for (a) broadcasting to other network nodes of the network data indicative of resources of the first network node available for sharing to assist in performing tasks of the other network nodes, and (b) receiving signals from the other network nodes, the second network node having a second transmitter/receiver arrangement for (a) broadcasting to further network nodes of the network a request for shared resources available from the further network nodes to assist in performing a task of the second network node and (b) receiving from the first network node the broadcast data indicative of the first network node available for sharing, the first and second network nodes being arranged for causing the first and second transmitter/receiver arrangements to exchange signals for enabling the resources of the first network node available for sharing to be used cooperatively with resources of the second network node such that the first network node completes the task of the second network node.

55. (*Previously presented*) The network of claim 54 wherein the network is a piconet and the first and second transmitter/receiver arrangements are adapted for use with the piconet.